

# **COPY OF PAPERS ORIGINALLY FILED**

**PATENT** 

### IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicants : Digvijay S. Chauhan et al.

Application No. : 09/895,850 Filed : June 29, 2001

For : METHOD AND SYSTEM FOR ENHANCED KNOWLEDGE

MANAGEMENT

Art Unit : 2122

Docket No. : 980041.402 Date : June 4, 2002

Box Missing Parts Commissioner for Patents Washington, DC 20231

#### PRELIMINARY AMENDMENT

Commissioner for Patents:

Please amend the above-identified application as follows:

#### In the Claims:

Please amend claim 1 to read as follows:

1. (Amended) A method in a computer system for dynamically generating a distributed knowledge base that is integrated with existing data, comprising:

receiving indications of data elements from the existing data and storing references to the indicated data elements;

using the stored references to the indicated data elements of existing data to register a plurality of users and experts;

receiving a request from one of the registered users to submit a question;
determining an expert to answer the question from the registered experts;
forwarding the question to the determined expert;
receiving an indication of an answer from the determined expert; and
storing the indicated answer with the submitted question so that users other than
the user from whom the request was received can access the question and indicated answer.

Please add new claims 2-76 to read as follows:

2. (New) A method for automatically integrating existing knowledge data stored in a first data repository with a distributed knowledge sharing management system, the distributed knowledge management system having a second data repository comprising:

defining a data structure associated with the second data repository, the data structure comprising a plurality of records;

automatically associating a record of the data structure with the existing knowledge data stored in the first data repository, such that when the knowledge sharing management system accesses the record, the existing knowledge data that is stored in the first data repository is automatically accessed.

- 3. (New) The method of claim 2 wherein the first data repository is an employee database.
- 4. (New) The method of claim 2 wherein the first data repository is a database that relates to manufacturing.
- 5. (New) The method of claim 2 wherein data records from the first data repository are not duplicated in the second data repository.

- 6. (New) The method of claim 2 wherein the location of data that is accessed by the distributed knowledge management system is transparent to a user of the knowledge management system.
  - 7. (New) A distributed knowledge sharing management system, comprising: first data repository comprising a plurality of data records; second data repository comprising existing knowledge data; and

data repository integrator that automatically associates a record stored in the first data repository with existing knowledge data stored in the second data repository, such that when the knowledge sharing management system accesses the record, existing knowledge data that is stored in the second data repository is accessed.

- 8. (New) The system of claim 7 wherein the second data repository is an employee database.
- 9. (New) The system of claim 7 wherein the first data repository is database that relates to manufacturing.
- 10. (New) The method of claim 7 wherein data records are not stored in duplicate in both the first data repository and the second data repository.
- 11. (New) The method of claim 7 wherein the location of data that is stored and accessed by the distributed knowledge management system is transparent to a user of the knowledge management system.
- 12. (New) A method in a computer system for managing categorized communication between a requestor and an expert resource using a person-to-person knowledge sharing portal, comprising:

displaying a list of categories;

determining a selected category from the displayed list of categories;

displaying a list of expert resources associated with the selected category, each expert resource having a rank, the displayed list of expert resources ordered by the ranks;

determining an indication of an expert resource from the displayed list of expert resources;

determining an indication of a question related to the selected category;
forwarding the indicated question to the indicated expert resource;
receiving an answer related to the indicated question;
displaying the received answer in conjunction with the indicated question;
determining an indication of a rating associated with the displayed answer; and
using the received rating indication, re-determining the rank associated with the
indicated expert resource.

13. (New) A computer-based person-to-person knowledge sharing portal system for managing categorized communication between a requestor and an expert resource, comprising:

knowledge requestor interface that is structured to display indications of categories and expert resources, obtain an indication of a question to pose to a determined expert resource of a determined category, and forward the indicated question to the determined expert resource;

expert resource interface that is structured to receive the indication of the question, obtain an indication of an answer, and forward the indicated answer; and

knowledge integration module that is structured to receive the indicated answer, obtain a rating associated with the indicated answer, use the received rating to determine the rank associated with the determined expert, and display the indicated question with the indicated answer.

14. (New) A computer-readable memory medium containing instructions for controlling a computer processor to manage categorized communication between a requestor and an expert resource using a person-to-person knowledge sharing portal, by:

displaying a list of categories;

determining a selected category from the displayed list of categories;

displaying a list of expert resources associated with the selected category, each expert resource having a rank, the displayed list of expert resources ordered by the ranks;

determining an indication of an expert resource from the displayed list of expert resources;

determining an indication of a question related to the selected category;
forwarding the indicated question to the indicated expert resource;
receiving an answer related to the indicated question;
displaying the received answer in conjunction with the indicated question;
determining an indication of a rating associated with the displayed answer; and
using the received rating indication, re-determining the rank associated with the
indicated expert resource.

15. (New) A method in a computer system for facilitating the exchange of information between a knowledge requestor and a knowledge resource and the creation of a searchable knowledge-base of the exchanged information, comprising:

receiving an indication of a question from the knowledge requestor; storing the indicated question;

determining one of a plurality of knowledge resources;

forwarding the indicated question to the determined knowledge resource;

receiving from the determined knowledge resource a response directed to the forwarded question;

storing in the searchable knowledge base the received response in conjunction with the stored question, so that the stored response in conjunction with the stored question can be displayed to a second knowledge requestor other than the knowledge requestor.

16. (New) The method of claim 15 wherein the identity of the knowledge requestor remains anonymous.

- 17. (New) The method of claim 15 wherein the identity of the knowledge resource remains anonymous.
  - 18. (New) The method of claim 15, further comprising: determining a category from a plurality of categories; and associating the indicated question with the determined category.
- 19. (New) The method of claim 18 wherein the system automatically determines the category to associate with the indicated question.
- 20. (New) The method of claim 18, the indicated question having text that relates to a subject, wherein the system determines the category from the subject text of the indicated question.
- 21. (New) The method of claim 18 wherein each of the plurality of knowledge resources is associated with one of the plurality of categories.
- 22. (New) The method of claim 21 wherein the determination of the one of the plurality of knowledge resources is based upon the category associated with each knowledge resource.
- 23. (New) The method of claim 18, further comprising, after receiving the response from the knowledge resource, automatically associating the category associated with the indicated question also with the knowledge resource.
- 24. (New) The method of claim 15, further comprising ranking each of the plurality of knowledge resources.
- 25. (New) The method of claim 24 wherein the rank of a knowledge resource is dynamically based on at least one of a rating associated with the knowledge resource, a number

of pending questions associated with the knowledge resource, a number of responses submitted by the knowledge resource, and response times associated with the knowledge resource.

- 26. (New) The method of claim 24 wherein the determination of the one of the plurality of knowledge resources is based on the ranks of the knowledge resources.
  - 27. (New) The method of claim 15, further comprising: receiving a rating of the received response; and indicating the received rating in conjunction with the stored response.
- 28. (New) The method of claim 27 wherein the rating is received from the knowledge requestor from which the indicated question was received.
- 29. (New) The method of claim 27 wherein the rating is received from a different source than the knowledge requestor.
- 30. (New) The method of claim 27 wherein the received rating is combined with another rating for the same response and the rating that is indicated in conjunction with the stored response is a combined rating.
- 31. (New) The method of claim 15 further comprising:
  receiving an indicator identifying one of the plurality of knowledge resources;
  receiving an indicator identifying a knowledge requestor to be muted; and
  when the indicated question is from the identified knowledge requestor,
  prohibiting forwarding of the indicated question to the identified knowledge resource.
- 32. (New) A searchable knowledge-base system for facilitating the exchange of information between a knowledge requestor and a knowledge resource, comprising:

  knowledge base data repository; and

knowledge management engine, having a requestor interface and a resource interface that, upon receiving a question from a knowledge requestor,

determines one of a plurality of knowledge resources and forwards the question to the determined knowledge resource,

receives a response from the determined knowledge resource, and stores in the knowledge base data repository the received response in conjunction with the received question, so that the stored response in conjunction with the stored question is displayable to a second knowledge requestor.

- 33. (New) The system of claim 32 wherein the identity of the knowledge requestor remains anonymous.
- 34. (New) The system of claim 32 wherein the identity of the knowledge resource remains anonymous.
- 35. (New) The system of claim 32 wherein the knowledge management engine determines a category from a plurality of categories and associates the received question with the determined category.
- 36. (New) The system of claim 35 wherein the knowledge management engine automatically determines the category to associate with the received question.
- 37. (New) The system of claim 35, the received question having text that relates to a subject, wherein the knowledge management engine determines the category from the subject text of the received question.
- 38. (New) The system of claim 35, each of the plurality of knowledge resources associated with a category, wherein the knowledge management engine automatically determines the one of the plurality of knowledge resources based on the category associated with the question.

- 39. (New) The system of claim 35, wherein the knowledge management engine automatically associates the category associated with the received question also with the determined knowledge resource.
- 40. (New) The system of claim 32 wherein the plurality of knowledge resources are ranked.
- 41. (New) The system of claim 40 wherein the knowledge management engine dynamically determines the knowledge resource rank based on at least one of a rating associated with the knowledge resource, a number of pending questions associated with the knowledge resource, a number of responses submitted by the knowledge resource, and response times associated with the knowledge resource.
- 42. (New) The system of claim 40 wherein the knowledge management engine determines the one of the plurality of knowledge resources based on the ranks of the knowledge resources.
- 43. (New) The system of claim 32, wherein the knowledge management engine receives a rating of the received response and indicates the received rating in conjunction with the stored response.
- 44. (New) The system of claim 43 wherein the rating is received from the knowledge requestor.
- 45. (New) The system of claim 43 wherein the rating is received from a different source than the knowledge requestor.
- 46. (New) The system of claim 43 wherein the knowledge management engine combines the received rating with another rating for the same response and the rating that is indicated in conjunction with the stored response is a combined rating.

47. (New) The system of claim 32 wherein the knowledge management engine

receives an indicator identifying one of the plurality of knowledge resources;
receives an indicator identifying a knowledge requestor to be muted; and
when the received question is from the identified knowledge requestor, prohibits
forwarding the received question to the identified knowledge resource.

48. (New) A computer-readable memory medium containing instructions for controlling a computer processor to facilitate the exchange of information between a knowledge requestor and a knowledge resource and the creation of a searchable knowledge-base of the exchanged information, by:

receiving an indication of a question from the knowledge requestor;

storing the indicated question;

determining one of a plurality of knowledge resources;

forwarding the indicated question to the determined knowledge resource;

receiving from the determined knowledge resource a response directed to the forwarded question;

storing in the searchable knowledge base the received response in conjunction with the stored question, so that the stored response in conjunction with the stored question can be displayed to a second knowledge requestor other than the knowledge requestor.

- 49. (New) The computer-readable memory medium of claim 48 wherein the identity of the knowledge requestor remains anonymous.
- 50. (New) The computer-readable memory medium of claim 48 wherein the identity of the knowledge resource remains anonymous.
- 51. (New) The computer-readable memory medium of claim 48, wherein the instructions further control the computer processor by:

determining a category from a plurality of categories; and

associating the indicated question with the determined category.

- 52. (New) The computer-readable memory medium of claim 51 wherein the instructions cause the computer processor to automatically determine the category to associate with the indicated question.
- 53. (New) The computer-readable memory medium of claim 51 wherein each of the plurality of knowledge resources is associated with one of the plurality of categories.
- 54. (New) The computer-readable memory medium of claim 48, wherein the instructions further control the computer processor to rank each of the plurality of knowledge resources.
- 55. (New) The computer-readable memory medium of claim 54 wherein the rank of a knowledge resource is dynamically based on at least one of a rating associated with the knowledge resource, a number of pending questions associated with the knowledge resource, a number of responses submitted by the knowledge resource, and response times associated with the knowledge resource.
- 56. (New) The computer-readable memory medium of claim 48 wherein the instructions further control the computer processor by:

receiving an indicator identifying one of the plurality of knowledge resources; receiving an indicator identifying a knowledge requestor to be muted; and when the indicated question is from the identified knowledge requestor, prohibiting forwarding of the indicated question to the identified knowledge resource.

57. (New) A method in a computer system for providing a private exchange of information between a user and an expert resource, comprising:

receiving a question from the user and directed to the expert resource; forwarding the question only to the expert resource;

receiving an answer to the question from the expert resource; receiving an answer rating associated with the received answer; associating the answer rating with the received answer; and

providing for display to only the user and the expert resource, the received answer in conjunction with the received question and the rating, thereby prohibiting display of the received question, the received answer, and the received rating to anyone other than the user and the expert resource.

- 58. (New) The method of claim 57 wherein the expert resource has an associated determined expert rank, and further comprising using the received answer rating to redetermine the expert rank associated with the expert resource.
- 59. (New) The method of claim 57 wherein the expert resource can mute a user.
- 60. (New) A method in a computer system for providing rated responses to questions on a question board, comprising:

receiving a question;

displaying the received question;

receiving from an expert resource a response that relates to the displayed question; displaying the received response in conjunction with the received question; receiving a rating of the received response; and indicating the rating in conjunction with the displayed response.

- 61. (New) The method of claim 60 wherein the source of the rating of the received response is the same as the source of the received question.
- 62. (New) The method of claim 60 wherein the source of the rating of the received response is different than the source of the received question.

- 63. (New) The method of claim 60 wherein the received rating is combined with another rating of the response and the rating that is indicated in conjunction with the displayed response is a combined rating.
- 64. (New) The method of claim 60 wherein the displaying of the received question comprises:

receiving an expiration condition; and

only when the expiration condition has not been met, displaying the question in conjunction with any received response.

- 65. (New) The method of claim 64 wherein the expiration condition indicates a period of time.
- 66. (New) The method of claim 64 wherein the expiration condition indicates a number of received responses.
- 67. (New) The method of claim 60 further comprising:

  receiving an indicator identifying an expert resource to be muted; and

  prohibiting the identified expert resource from submitting a response to the submitted question.
- 68. (New) A question board in a computer system having a display facility, comprising:

expert resource; and

question resolution engine structured so that, in response to receiving a question, the engine

forwards the received question to the expert resource;

upon receiving a response from the expert resource that relates to the forwarded question, displays the response on the display facility; and

upon receiving a rating of the response, indicates the rating in conjunction with the displayed response.

- 69. (New) The question board of claim 68 wherein the question resolution engine displays the received question on the display facility.
- 70. (New) The question board of claim 68 wherein the source of the rating of the received response is the same as the source of the received question.
- 71. (New) The question board of claim 68 wherein the source of the rating of the received response is different than the source of the received question.
- 72. (New) The question board of claim 68 wherein the received rating is combined with another rating for the response and a combined rating is indicated in conjunction with the displayed response.
- 73. (New) The question board of claim 68 wherein the question resolution engine is further structured to:

receive an expiration condition; and

only when the expiration condition has not been met, display the received question in conjunction with any received response.

- 74. (New) The question board of claim 73 wherein the expiration condition indicates a period of time.
- 75. (New) The question board of claim 73 wherein the expiration condition indicates a number of received responses.
- 76. (New) The question board of claim 68 wherein the question resolution engine is further structured to:

receive an indicator identifying an expert resource to be muted; and prohibit display of a response received from the identified expert resource.

#### **REMARKS**

Claims 1-76 are currently pending in this application. Claim 1 has been amended. Claims 2-76 have been added. No new matter has been entered by way of this amendment. Applicants request entry of this Preliminary Amendment before examination of the application.

Attached hereto is a marked-up version of the changes made to the claims by the current amendment. The attached page is captioned "Version With Markings to Show Changes Made."

All of the claims remaining in the application are now clearly allowable. Applicants respectfully request favorable consideration and a Notice of Allowance.

Respectfully submitted,

Digvijay S. Chauhan et al.

Seed Intellectual Property Law Group PLLC

ten M. Burnan

Ellen M. Bierman

Registration No. 38,079

EMB:asl

Enclosure:

Postcard

701 Fifth Avenue, Suite 6300 Seattle, Washington 98104-7092

Phone: (206) 622-4900 Fax: (206) 682-6031

## VERSION WITH MARKINGS TO SHOW CHANGES MADE

#### In the Claims:

Claim 1 has been amended as follows:

1. (Amended) A method in a computer system for dynamically generating a distributed knowledge base within a computer system that is integrated with existing data, comprising:

receiving indications of data elements from the existing data and storing references to the indicated data elements;

using the stored references to the indicated data elements of existing data to register a plurality of users and experts;

receiving a request from one of the registered users to submit a question; determining an expert to answer the question from the registered experts; forwarding the question to the determined expert;

receiving an indication of an answer from the determined expert; and storing the indicated answer with the submitted question so that users other than the user from whom the request was received can access the question and indicated answer.

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**PATENT** 



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**MANAGEMENT** 

Art Unit

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**Box Missing Parts** Commissioner for Patents Washington, DC 20231

#### FILING FORMAL DRAWINGS

Commissioner for Patents:

Enclosed are 41 sheets of formal drawings, Figures 1-40, for filing in the above-identified application.

> Respectfully submitted, Digvijay S. Chauhan et al.

Seed Intellectual Property Law Group PLLC

Ellen M. Bierman

Registration No. 38,079

EMB:asl

Enclosures:

Postcard

Formal Drawings (41 sheets, Figs. 1-40)

701 Fifth Avenue, Suite 6300 Seattle, Washington 98104-7092

Phone: (206) 622-4900 Fax: (206) 682-6031

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